BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

FILED
10/09/20
04:59 PM

Order Instituting Rulemaking Regarding Building Decarbonization.	Rulemaking 19-01-011 (Filed on January 31, 2019)

SOUTHERN CALIFORNIA GAS COMPANY'S (U 904 G) OPENING COMMENTS ON ADMINISTRATIVE LAW JUDGE'S RULING SETTING PREHEARING CONFERENCE AND DIRECTING COMMENT ON ENERGY DIVISION PHASE II STAFF PROPOSAL

JOHNNY Q. TRAN

SOUTHERN CALIFORNIA GAS COMPANY
555 West 5th Street, GT14E7
Los Angeles, CA 90013
Telephone: (213) 244-2981
Facsimile: (213) 629-9620
E-mail: jqtran@socalgas.com

October 9, 2020

TABLE OF CONTENTS

Page

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Building Decarbonization.	Rulemaking 19-01-011 (Filed on January 31, 2019)

SOUTHERN CALIFORNIA GAS COMPANY'S (U 904 G) OPENING COMMENTS ON ADMINISTRATIVE LAW JUDGE'S RULING SETTING PREHEARING CONFERENCE AND DIRECTING COMMENT ON ENERGY DIVISION PHASE II STAFF PROPOSAL

Pursuant to the Administrative Law Judge's Ruling Setting Prehearing Conference and Directing Comment on Energy Division Phase II Staff Proposal issued September 24, 2020 ("ALJ Ruling"), Southern California Gas Company ("SoCalGas") submits the following Opening Comments.

I. INTRODUCTION

On August 25, 2020, the California Public Utilities Commission ("Commission" or "CPUC") issued its Phase II Amended Scoping Memo and Ruling of Assigned Commissioner ("Phase II Amended Scoping Memo"). Subsequent to the Phase II Amended Scoping Memo, on September 15, 2020, Energy Division hosted a public workshop on the proposed Wildfire and Natural Disaster Resiliency Rebuild ("WNDRR") program, mobile home park ("MHP") electrification, and possible adjustment to electric rates for customers who switch to high-efficiency heat pump water heaters ("HPWH"). On September 24, 2020, the ALJ issued the ALJ Ruling requesting comments on specific questions related to incentive layering proposal, the proposed WNDRR program, and proposed rate adjustment for electric water heating customers.

SoCalGas stands committed to decarbonizing the energy sector and aligns with California's carbon reduction goals. SoCalGas believes that California can decarbonize its buildings by decarbonizing both electricity and natural gas supplies—not just electrifying end uses. SoCalGas supports meeting California's aggressive climate goals in a thoughtful,

reasoned, studied, and cost-effective way. To that end, SoCalGas submits these Opening Comments focused on incentive layering and the WNDRR program.

II. QUESTIONS REGARDING THE INCENTIVE LAYERING PROPOSAL

SoCalGas agrees with the Commission that there is an opportunity to layer on existing incentive programs and supports an incentive layering framework that will maximize ratepayer cost and program benefits. SoCalGas's comments in this section respond to Questions A.1 - 8 of Attachment A to the ALJ Ruling.

A properly implemented incentive layering framework can extend available funding and expedite technology adoption. Nonetheless, it will be necessary to understand the unique program benefits, costs, and requirements in detail before layering incentives. Incentive layering must be done in a manner that results in meaningful returns. Otherwise, funds will be wasted and California's climate goals will not be met.

While the Staff Proposal recognizes the challenges of layering programs which have different funding sources, design requirements, goals, and evaluation methodologies,[1] it does not address or explore the potential differences of each program with enough detail to provide meaningful guidance on how to effectively layer the incentives. Instead, the Staff Proposal moves forward in proposing a layering supply chain under the assumption that the identified category of programs *should* be part of the layering formula. SoCalGas urges the Commission to first explore each program in detail to decide if the identified programs share common goals and/or pathways toward the decarbonization of a building. Workshops across the multiple programs should be scheduled to better understand the common goals, pathways, and baselines of each program. For example, while greenhouse gas ("GHG") emission reductions is a common outcome of Energy Efficiency ("EE") and Self-Generation Incentive Program ("SGIP"), they achieve this outcome differently. These two programs use a different baseline to account for GHG emission reductions. Specifically, for fuel substitution technologies eligible for EE incentives such as HPWHs, EE compares the GHG emissions of the baseline technology to the replacement technology;[2] whereas, SGIP focuses on reducing GHG emissions in comparison to

[1] Staff Proposal at 7
[2] https://www.cpuc.ca.gov/General.aspx?id=6442463306

the electric grid.[3] Similarly, EE calculates kWh or therm savings from an efficient measure or process in comparison to the existing conditions or code requirement when measuring the resulting energy and GHG savings; whereas, SGIP values kWh when measuring the electric load reduction from the grid. Another goal of SGIP is to provide grid support by improving the reliability of the electric distribution and transmission system,[4] which is an indirect benefit of EE. Said differently, while both programs can reduce GHG emissions, value kWh, and provide grid support, they measure these benefits differently. Under these circumstances it would be incorrect to include SGIP within the list of programs in the layering chain as the benefits would not be proportional as suggested by staff. If the intent behind a layering framework is to maximize customer or participant benefits, because HPWHs can reduce GHG emissions from the grid, when it functions as an energy storage system, customers could potentially receive an incremental incentive from SGIP if there are incremental GHG emission reductions in relation to the grid. To do this, it might be necessary to add specific controls to ensure that HPWH's draw time is not occurring during peak hours. For these reasons, SoCalGas recommends additional analysis of all program benefits and baselines before adopting a layering framework. At the very least, programs with different baselines should be further evaluated. Failure to do so may unintentionally minimize ratepayer benefits and devalue other programmatic goals. Once the baseline of all programs has been analyzed, a priority or order which allows customers the flexibility to participate in all or some programs should be considered. Assuring customer choice and participation options should be the primary focus when determining how to layer programs.

Moreover, if the Commission intends to include costs associated with labor, workforce development, and/or electric panel upgrades in the incentive amounts, then the costs should be appropriately accounted as part of the technology's cost. If the adoption of HPWHs is dependent on incentives for labor, workforce development, and/or electric panel upgrades, then these costs should be disclosed and calculated as such. Ratepayers should understand the full cost associated with the adoption of these decarbonization technologies. It would be imprudent to

---

[3] https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy/Energy_Programs/Demand_Side_Management/Customer_Gen_and_Storage/2016-2017_Self-Generation_Incentive_Program_Impact_Evaluation.pdf

[4] PUC §379.6(a)(1)

require ratepayers to incentivize these costs without crediting them for their investment or valuing the utility avoided cost. Ultimately, the Commission should create guidelines to ensure that ratepayers, end-use customers, and developers collectively incentivize no more than the total project cost and only if these costs are included into the cost of adoption.

For these reasons, SoCalGas recommends additional workshops to further evaluate the various program benefits, goals and appropriate baselines in order to better inform an incentive layering program.

III. QUESTIONS REGARDING THE PROPOSED WNDRR PROGRAM

SoCalGas supports implementing programs dedicated specifically to support the construction of decarbonized buildings in communities affected by wildfires and other natural disasters. However, SoCalGas does not support the WNDRR program as proposed in the Phase II Staff Proposal. SoCalGas believes additional workshops are necessary to modify the program to take into account safety, reliability, affordability, and the specific climate goals the program is designed to achieve. SoCalGas's preliminary comments are in response to Questions B.1, 4, 5 and 10 of Attachment A to the ALJ Ruling.

A. The WNDRR Program Should be Modified to Include Alternatives to All Electric Rebuilds

According to the 2018 Intergovernmental Panel on Climate Change ("IPCC"), the most important time is in the next ten years to reduce emissions to avoid the worst climate impacts.[5] Both gas and electric heat pumps are good technologies that support climate goals by increasing energy efficiency. However, simply installing an electric heat pump to substitute for a current gas heating application does not guarantee lower emissions compared to replacing the gas appliance with a higher efficient one. If a household did not already have an air conditioner, an electric heat pump introduces a high global warming pollutant, refrigerant or hydroflourocarbons ("HFCs"), where none existed before. To counter the ozone depleting downsides of the old refrigerants (e.g. R-22, GWP 1810), the new refrigerants in heat pumps (e.g. R410A GWP (2088), R134a (1430)) are made without the ozone depleting chlorine but unfortunately, continue to be hundreds to thousands of times more powerful than carbon dioxide

[5] Intergovernmental Panel on Climate Change, Global Warming of 1.5°C (IPCC 2018).

in their global warming potentials.[6] In fact, HFCs or ozone depleting substance ("ODS") substitutes are one of the few greenhouse gases that increased in the California Air Resources Board's ("CARB") latest inventory and are expected to grow.[7]

In addition, the electric grid is not clean enough and will not be until at least the 2030 timeframe to get emission reductions now from the potential increased efficiencies that an electric heat pump can provide. Household energy demand tends to peak in the morning and evening hours, when residents are preparing to leave for or returning from work, school or other activities and when intermittent renewable power, particularly solar, is less available or unavailable. At these times, electric supplies must be produced from other sources, including natural gas-fired power plants. Converting fuels, such as natural gas, to electricity to meet home demand is less efficient than directly using natural gas. As a result, a Stanford University researcher has estimated that when renewable power is unavailable, such as during the early morning hours, residential electricity consumption produces *three times* more GHG emissions than natural gas.[8] Unfortunately, this means that emissions will likely increase from use of electric heat pumps for three reasons: (1) higher carbon intensity of the electric grid using natural gas fired power plants during times of peak demand; (2) the increased use of high global warming refrigerants where none existed before; and (3) the increased electric load where none existed before (i.e. air conditioning load).

Complicating this for the ratepayer is that electricity is becoming more costly and less reliable. On an energy equivalent basis, electricity is roughly four times more costly than gas.[9] In addition, adding an electric heat pump can be costly for the customer. For example, an article in GreenTech Media documented a highly motivated family's effort to switch all their gas appliances to electric.[10] The costs were in the thousands of dollars and the family borrowed money in order to pay for the switch.

---

[6] https://ww2.arb.ca.gov/ghg-gwps#gwps
[7] 2019 Edition, California Greenhouse Gas Emission Inventory: 2000 – 2017, pg. 16 https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf
[8] *See* Anthony R. Kovscek, *Is a natural gas ban an 'antidote to climate change'?*, San Jose Mercury News (Nov. 12, 2019), https://mercurynews-ca.newsmemory.com/?publink=754c8d2e3_13411ac.
[9] *See* Robert Bryce, *The High Cost of California Electricity is Increasing Poverty*, The Foundation for Research on Equal Opportunity (July 8, 2020), https://freopp.org/the-high-cost-of-california-electricity-is-increasing-poverty-d7bc4021b705
[10] https://www.greentechmedia.com/articles/read/what-does-it-take-to-electrify-everything-in-your-home

> "The Guays paid $13,100 for the installation of an 18,000-BTU mini ducted heat pump from Fujitsu and accompanying duct work. A-1 had to install duct work for the unit because the home had lacked central heating.
>
> …
>
> "Kat pointed out the irony that in going all-electric, their home is even more dependent on the grid than it was before."

Further, Figure 1 below is excerpted from a recent technical report published by the National Renewable Energy Laboratory which clearly shows electric disturbances have increased from both non-weather (i.e. aging infrastructure) and weather related (e.g. windstorms) events.[11]

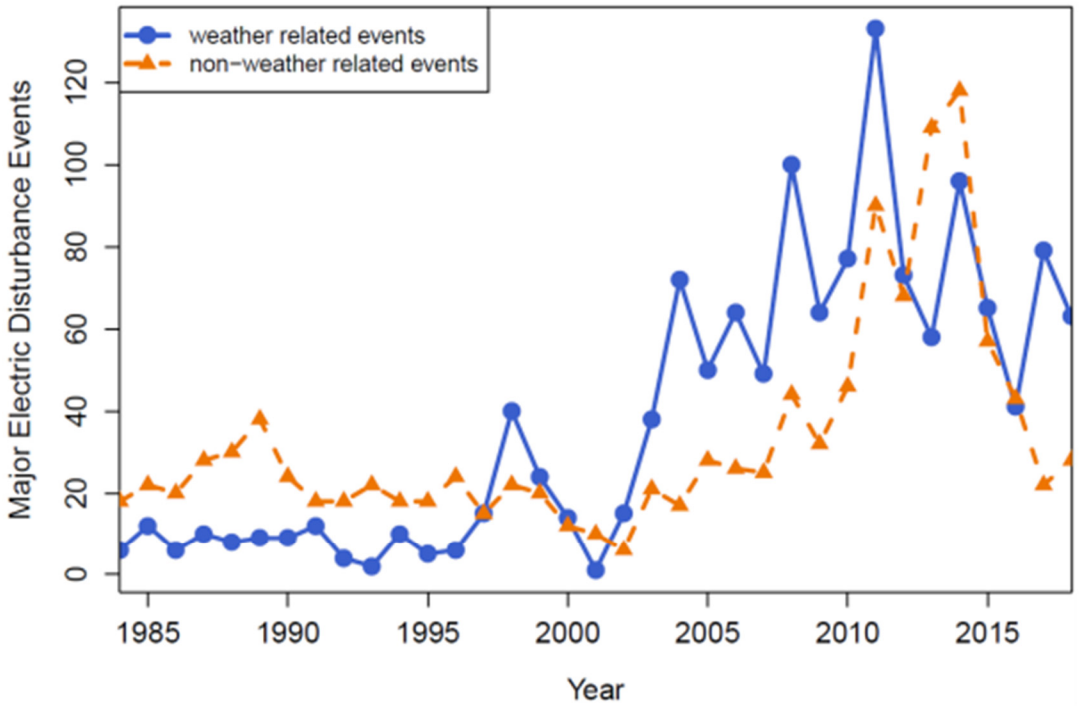

Figure 1. Major electric disturbance events between 1984 and 2018.

Figure adapted from (Laws, Anderson, DiOrio, Li , & McLaren, 2018) with additional data from DOE form OE-417.

To reduce electricity infrastructure induced wildfires, the need to shut down the power system in high risk areas of fire hazards via the Public Safety Power Shutoff ("PSPS") program

[11] Sean Ericson and Dan Olis, *A Comparison of Fuel Choices for Backup Generators*, March 2019, at 11, https://www.nrel.gov/docs/fy19osti/72509.pdf

has created uncertainty and significant economic hardships for Californians. The WNDRR program targets areas that have already been hit by fires and therefore are likely to continue to be in high risk fire areas. These areas are likely to experience more frequent power shut-offs due to PSPS events. Therefore, it is irresponsible to rebuild all-electric without providing for back-up power in areas that are known to have low electricity reliability. Customers in these homes will likely need backup generators possibly fueled by gasoline or diesel,[12] which will result not only in increased GHG emissions but also in harmful NOx and diesel soot emissions. Moreover, because the electric system is aboveground it is more vulnerable to climate events than the gas grid according to adaptation and resiliency research conducted by the California Energy Commission ("CEC") and ICF, which means further costs to harden the system.[13] To continue to push a one pathway approach, an "all-eggs-in-one-basket" electrification approach, is imprudent and risky for customers.

Objective scientific studies find leveraging the gas system and its workers can "accelerate" decarbonization goals for all sectors of the economy. Leveraging the existing gas system to convey hydrogen, renewable natural gas and carbon dioxide to sequestration sites is critical to meeting decarbonization goals.[14] The study also emphasized the importance of biofuels (hydrogen, renewable natural gas, etc.) to create long term storage potential for intermittent renewable electricity and decarbonization pathways for all sectors of the economy.[15] Another study by Lawrence Livermore National Labs, "Getting to Neutral"[16], also came to the same conclusion of the importance of the existing gas system to support negative carbon pathways.

---

[12] https://www.sfchronicle.com/bayarea/article/Everyone-is-buying-generators-to-get-through-PG-E-14704266.php

[13] https://www.energy.ca.gov/sites/default/files/2019-11/Energy_CCCA4-CEC-2018-004_ADA.pdf; ICF, *Case Studies of Natural Gas Sector Resilience*, October 2019, https://www.socalgas.com/1443742022576/SoCalGas-Case-Studies.pdf

[14] Energy Futures Initiative, Dr. Moniz, *Optionality, Flexibility & Innovation, Pathways for Deep Decarbonization in California*, May 2019. https://energyfuturesinitiative.org/

[15] *Id*.

[16] Livermore Lab Foundation, *Getting to Neutral: Options for Negative Carbon Emissions in California*, January 2020. https://livermorelabfoundation.org/2019/12/19/getting-to-neutral/

Many customers have the choice today to go all electric and a very low percentage of customers choose to do so.[17] In July 2019, PG&E made a presentation to the Commission on an update of their Advanced Energy Rebuild ("AER") Program.[18] At that time, of the 3,246 building permits pulled in the eligible program area, 207 (6%) of them participated in the AER program.[19] Of those 207, only 33, or 16% were built all-electric.[20] This likely means that the remaining 94% of homes built were built to code minimum, thereby losing opportunities for long-term energy efficiency and achieving the needed GHG reductions to avoid the worst climate impacts. While the data was not tracked, PG&E and their consultant conveyed at the workshop that some number of the 33 all-electric rebuilds were all-electric to begin with as they did not have access to natural gas service. These types of participation rates in electric-only new construction programs are exemplar of other data points that indicate that most customers, approximately 90% of them, would not choose an all-electric home.[21] This potentially leaves a large majority of customers with home built to code minimum resulting in California missing out on an opportunity to further reduce GHG emissions.

SoCalGas's energy efficiency programs, including residential new construction incentives of high efficiency gas equipment, have proven to move the needle in terms of advancing energy efficiency and emissions reductions and is more cost-effective. For example, as stated in the July 2019 Commission workshop, SoCalGas energy efficiency programs reduce emissions at a rate of $196 per metric ton, compared to the $2,897 from the AER program.[22]

Therefore, the WNDRR program should be modified to include advanced efficiency natural gas end uses so that those customers who opt not to build all-electric homes can still

---

[17] Competitive Edge; California Natural Gas Poll Prepared for CBIA; April, 2018; base: 3,000 respondents, available at https://cbia.org/cbia-news/ (See press release dated April 23, 2018)
[18] Advanced Energy Rebuild Program presentation by PG&E, CPUC/CEC Joint Agency workshop, July 30, 2019, available at https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442462147.
[19] *Id*. at 15.
[20] *Id*.
[21] Competitive Edge; California Natural Gas Poll Prepared for CBIA; April, 2018; base: 3,000 respondents; https://cbia.org/cbia-news/ (See press release dated April 23, 2018)
[22] Advanced Energy Rebuild Program presentation by PG&E, CPUC/CEC Joint Agency workshop, July 30, 2019, available at https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442462147, at 17; SoCalGas 2019 Energy Efficiency Annual Report, pp. 88-91, available at https://www.socalgas.com/sites/default/files/SCG%202019%20Energy%20Efficiency%20Annual%20Report%20-%205-15-20%20Final.pdf

contribute to the reduction of GHG emissions. The Commission should modify the WNDRR program to include advanced efficiency natural gas end uses, such as solar thermal water heating, gas heat pump water heating that uses no high global warming refrigerants, combine heat and power systems, fuel cells, and others into decarbonization programs.[23] Including high-efficiency natural gas cooking and heating appliances supplied by renewable gas, including but not limited to renewable natural gas and hydrogen, will further help California achieve 2030 climate goals that can avoid the worst climate outcomes as described by the IPCC.

Further, by excluding gas customers from the WNDRR program, the Commission may be inadvertently impinging on the regulatory compact. The regulatory compact "is viewed as a contract between the utility's investors and its customers; as such, it establishes rights, obligations, and benefits for both sides of the bargain…."[24] The bargain is that the utilities accept the obligation to serve and charge regulated cost-based rates and customers accept limited entry in exchange for monopoly pricing.[25] Core customers have the right to receive natural gas services from gas utilities in accordance with the gas utilities' tariffs.[26] With approximately 90% of customers preferring to not choose an all-electric home, imposing an all-electric program on customers would impinge on the customers' ability to receive gas service and the gas utilities' ability to serve those customers.

B. Staff Proposal to Fund WNDRR Through Gas Corporation's GHG Emission Allowance Auction Proceeds Violates California Code of Regulations Section 95893(d)(3)

To be eligible for the WNDRR program, the property must be "red-tagged single-family residential buildings in a city, county, or combined jurisdiction that declares a Local Emergency

[23] See SoCalGas's presentation at the June 15, 2020 Energy Division Workshop available at https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442465636
[24] D.20-01-002, at 10.
[25] *Id*. (Under the regulatory compact, the utility is provided the opportunity to recover appropriately incurred costs plus a fair return on capital investments. Investors will only provide capital to provide utility services if they anticipate obtaining a return that is consistent with returns from directing their capital to alternative uses with similar risks. Customers will only accept utility rates if they perceive the rates to fairly compensate the utility.)
[26] See SoCalGas Tariff Rule 3; Public Utilities Code §§328 and 328.2.

Proclamation."[27] In addition, only properties being rebuilt all-electric will be eligible.[28] Staff proposes to collect $5 million in annual funding for a period of 10 years from "proceeds obtained by gas corporations from the auction of GHG emission allowances allocated as part of the State's Cap-and-Trade program"[29] to fund the WNDRR program.

However, California Code of Regulations ("CCR") Section 95893(d)(3) states "Allowance value, including any allocated allowance auction proceeds, obtained by a natural gas supplier ***must be used for the primary benefit of retail natural gas ratepayers of each natural gas supplier***, consistent with the goals of AB 32, and may not be used for the benefit of entities or persons other than such ratepayers." (Emphasis added.) The Staff Proposal's use of allocated allowance proceeds from natural gas suppliers to fund the all-electric WNDRR program for the next 10 years violates CCR Section 95893(d)(3). The funds are not being used for the "primary benefit of retail natural gas ratepayers." There is no requirement that the fund be used for any retail natural gas ratepayer. Instead, the funds are being used for an all-electric program and excludes natural gas in violation of CCR Section 95893(d)(3).

In addition, the Staff Proposal incorrectly relies on the structure established under D.20-03-027 for the BUILD Program and TECH Initiative to fund the WNDRR program.[30] Unlike the BUILD Program and TECH Initiative, the WNDRR program was not established by legislation and did not receive legislative approval to access natural gas suppliers' allowance proceeds. SB 1477 expressly permitted the Commission to allocate $50 million of natural gas suppliers' allowance proceeds for the purposes of funding the BUILD Program and TECH Initiative.[31] There is no such legislative authority for the WNDRR program. Therefore, CCR Section 95893(d)(3) controls and the Commission cannot fund the WNDRR program (as described in the Staff Proposal) with allocated allowance auction proceeds from natural gas suppliers.

C. The WNDRR Program Should be Modified to Require Cost-Effectiveness to be Considered Up Front as Projects are Proposed and *Ex Post* Evaluation Ever Two Years.

[27] Staff Proposal at 29 (internal footnote omitted).
[28] Staff Proposal at 30-31.
[29] Staff Proposal at 43.
[30] *Id*.
[31] SB 1477, Section 2 as codified in Public Utilities Code Section 748.6.

SoCalGas understands that the proposed WNDRR program's primary use is natural disaster recovery, but this purpose does not exempt it from a preliminary cost-effectiveness showing. As stated above, the proposed program would need to utilize ratepayer funds, absent legislative authority, and the Commission requires a cost-effectiveness showing to evaluate whether authorizing ratepayer dollars is "just and reasonable" as required by Public Utilities Code §451.[32] A preliminary cost-effectiveness showing is reasonable for the Commission to evaluate whether the WNDRR program would be comparable with other potential actions utilities could take to address new construction after wildfires or natural disasters.

Additionally, the Staff Proposal's recommendation to assess cost-effectiveness on an *ex-post* basis after five years is too long. Program modifications can be made in much more real-time, similar to the two-year Evaluation, Measurement & Verification ("EM&V") cycle adopted in the EE proceeding, so that utilities are operating the program in the most cost-effective manner. Further, to wait until the 2032 WNDRR evaluation report to recommend to the CPUC if the program shall continue or not, is too long to operate a program without any consideration of cost-effectiveness to ratepayers.[33] Should the program prove to not be cost-effective, it would be more than 12 years before the recommendation to modify the program would be given. SoCalGas recommends that a preliminary cost-effectiveness showing be required as projects are proposed and authorized as well as an *ex post* evaluation every two years. This would allow the Commission to assess on an *ex ante* basis the ratepayer investment to be made, and then have a basis of comparison when completing the *ex post* evaluation once implemented.

IV. CONCLUSION

SoCalGas supports California's efforts to decarbonize buildings. SoCalGas supports an incentive layering framework that will maximize ratepayer cost and program benefits. SoCalGas also supports implementing programs dedicated specifically to support the construction of decarbonized buildings in communities affected by wildfires and other natural disasters. SoCalGas believes that both programs must be implemented in a thoughtful manner taking into consideration safety, reliability, affordability, and the specific climate goals the program is designed to achieve and

[32] Public Utilities Code §451.
[33] Staff Proposal at 46.

looks forward to participating in further workshops on incentive layering and the WNDRR program to better tailor the programs to the specific needs of customers and State of California.

Respectfully submitted on behalf of SoCalGas,

By: ***/s/ Johnny Q. Tran***
Johnny Q. Tran

JOHNNY Q. TRAN

Attorneys for:
SOUTHERN CALIFORNIA GAS COMPANY
555 West Fifth Street, Suite 1400
Los Angeles, California 90013
Telephone: (213) 244-2981
Facsimile: (213) 629-9620
Email: JQTran@socalgas.com

October 9, 2020